

AMENDMENTS TO THE CLAIMS

Claim 1 (Previously Presented): A thermoplastic composition, comprising:

about 15 to about 35 weight percent of a poly(arylene ether);

about 15 to about 46 weight percent of a homopolymer of an alkenyl aromatic monomer;

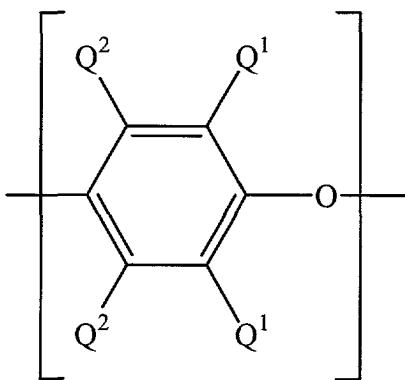
about 10 to about 35 weight percent of a polyolefin;

about 1 to about 15 weight percent of a hydrogenated block copolymer of alkenyl aromatic compound and a conjugated diene having an alkenyl aromatic content of 40 to about 90 weight percent, and wherein the hydrogenated block copolymer comprises a styrene-(ethylene-butylene)-styrene triblock copolymer; and

about 1 to about 15 weight percent of an unhydrogenated block copolymer of alkenyl aromatic compound and a conjugated diene;

wherein the composition is substantially free of rubber-modified poly(alkenyl aromatic) resin; and wherein all weight percents are based on the total weight of the composition.

Claim 2 (Original): The thermoplastic composition of Claim 1, wherein the poly(arylene ether) comprises a plurality of structural units of the formula

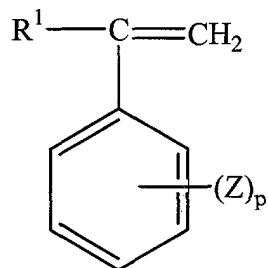


wherein for each structural unit, each Q¹ is independently halogen, primary or secondary C₁-C₈ alkyl, phenyl, C₁-C₈ haloalkyl, C₁-C₈ aminoalkyl, C₁-C₈ hydrocarbonoxy, or C₂-C₈ halo hydrocarbonoxy wherein at least two carbon atoms separate the halogen and oxygen atoms; and each Q² is independently hydrogen, halogen, primary or secondary C₁-C₈ alkyl, phenyl, C₁-C₈ haloalkyl, C₁-C₈ aminoalkyl, C₁-C₈ hydrocarbonoxy, or C₂-C₈ halo hydrocarbonoxy wherein at least two carbon atoms separate the halogen and oxygen atoms.

Claim 3 (Original): The thermoplastic composition of Claim 2, wherein each Q¹ is independently C₁-C₄ alkyl or phenyl, and each Q² is independently hydrogen or methyl.

Claim 4 (Original): The thermoplastic composition of Claim 1, wherein the poly(arylene ether) comprises a copolymer of 2,6-dimethylphenol and 2,3,6-trimethylphenol.

Claim 5 (Original): The composition of Claim 1, wherein the homopolymer of an alkenyl aromatic monomer is a polymerization product of an alkenyl aromatic monomer of the formula



wherein R¹ is hydrogen, C₁-C₈ alkyl, or halogen; Z is vinyl, halogen, or C₁-C₈ alkyl; and p is 0 to 5.

Claim 6 (Original): The composition of Claim 1, wherein the homopolymer of an alkenyl aromatic monomer comprises homopolystyrene.

Claim 7 (Original): The composition of Claim 1, wherein the homopolymer of an alkenyl aromatic monomer comprises atactic homopolystyrene.

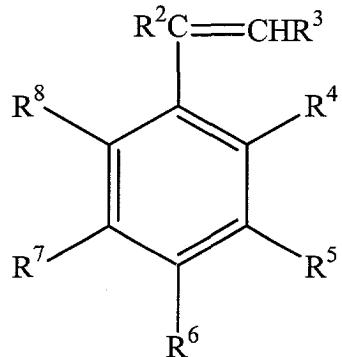
Claim 8 (Original): The thermoplastic composition of Claim 1, wherein the polyolefin comprises a homopolymer or copolymer having at least about 80 weight percent of units derived from polymerization of ethylene, propylene, butylene, or a mixture thereof.

Claim 9 (Original): The thermoplastic composition of Claim 1, wherein the polyolefin is a propylene polymer; and wherein the propylene polymer comprises a homopolymer of polypropylene, or a random, graft, or block copolymer of propylene and at least one olefin selected from ethylene and C₄-C₁₀ alpha-olefins, with the proviso that the copolymer comprises at least about 80 weight percent of repeating units derived from propylene.

Claim 10 (Original): The thermoplastic composition of Claim 1, wherein the polyolefin comprises a homopolypropylene.

Claim 11 (Previously Presented): The thermoplastic composition of Claim 1, wherein the hydrogenated block copolymer comprises:

(A) at least one block derived from an alkenyl aromatic compound having the formula



wherein R² and R³ each represent a hydrogen atom, a C₁-C₈ alkyl group, or a C₂-C₈ alkenyl group; R⁴ and R⁸ each represent a hydrogen atom, a C₁-C₈ alkyl group, a chlorine atom, or a bromine atom; and R⁵-R⁷ each independently represent a hydrogen atom, a C₁-C₈ alkyl group, or a C₂-C₈ alkenyl group, or R⁴ and R⁵ are taken together with the central aromatic ring to form a naphthyl group, or R⁵ and R⁶ are taken together with the central aromatic ring to form a naphthyl group; and

(B) at least one block derived from a conjugated diene, in which the aliphatic unsaturated group content in the block (B) is reduced by hydrogenation.

Claim 12 (Canceled).

Claim 13 (Original): The thermoplastic composition of Claim 1, wherein the hydrogenated block copolymer has a styrene content of about 50 to about 85 weight percent.

Claim 14 (Original): The thermoplastic composition of Claim 1, wherein the hydrogenated block copolymer has a styrene content of about 55 to about 70 weight percent.

Claim 15 (Original): The thermoplastic composition of Claim 1, wherein the unhydrogenated block copolymer comprises a styrene-butadiene diblock copolymer or a styrene-butadiene-styrene triblock copolymer.

Claim 16 (Original): The thermoplastic composition of Claim 1, further comprising a hydrogenated block copolymer of an alkenyl aromatic compound and a conjugated diene, wherein the hydrogenated block copolymer has an alkenyl aromatic content of about 10 to less than 40 weight percent.

Claim 17 (Currently Amended): ~~The A~~ thermoplastic composition, of Claim 1, further comprising:

about 15 to about 35 weight percent of a poly(arylene ether);

about 15 to about 46 weight percent of a homopolymer of an alkenyl aromatic monomer;

about 10 to about 35 weight percent of a polyolefin;

about 1 to about 15 weight percent of a hydrogenated block copolymer of alkenyl aromatic compound and a conjugated diene having an alkenyl aromatic content of 40 to about 90 weight percent, and wherein the hydrogenated block copolymer comprises a styrene-(ethylene-butylene)-styrene triblock copolymer;

about 1 to about 15 weight percent of an unhydrogenated block copolymer of alkenyl aromatic compound and a conjugated diene; and

a polypropylene-polystyrene graft copolymer having a propylene polymer backbone and one or more styrene polymer grafts;

wherein the composition is substantially free of rubber-modified poly(alkenyl aromatic) resin; and wherein all weight percents are based on the total weight of the composition.

Claim 18 (Currently Amended): ~~The A thermoplastic composition of Claim 17, comprising:~~

about 15 to about 35 weight percent of a poly(arylene ether);

about 15 to about 46 weight percent of a homopolymer of an alkenyl aromatic monomer;

about 10 to about 35 weight percent of a polyolefin;

about 1 to about 15 weight percent of a hydrogenated block copolymer of alkenyl aromatic compound and a conjugated diene having an alkenyl aromatic content of 40 to about 90 weight percent, and wherein the hydrogenated block copolymer comprises a styrene-(ethylene-butylene)-styrene triblock copolymer;

about 1 to about 15 weight percent of an unhydrogenated block copolymer of alkenyl aromatic compound and a conjugated diene; and

a polypropylene-polystyrene graft copolymer having a propylene polymer backbone and one or more styrene polymer grafts; wherein the polypropylene-polystyrene graft copolymer comprises about 10 to about 90 weight percent propylene polymer backbone and about 90 to about 10 weight percent styrene polymer grafts;

wherein the composition is substantially free of rubber-modified poly(alkenyl aromatic) resin; and wherein all weight percents are based on the total weight of the composition.

Claim 19 (Original): The composition of Claim 1, further comprising about 2 to about 20 weight percent of an ethylene/alpha-olefin elastomeric copolymer.

Claim 20 (Original): The thermoplastic composition of Claim 19, wherein the ethylene/alpha-olefin elastomeric copolymer comprises a copolymer of ethylene and at least one C₃-C₁₀ alpha-olefin.

Claim 21 (Original): The thermoplastic composition of Claim 19, wherein the ethylene/alpha-olefin elastomeric copolymer comprises an ethylene-butylene rubber, an ethylene-propylene rubber, or a mixture thereof.

Claim 22 (Original): The composition of Claim 1, wherein the composition is substantially free of reinforcing fillers.

Claim 23 (Original): The composition of Claim 1, wherein the composition after molding has a flexural modulus measured at 23°C according to ASTM D256 of at least about 230,000 pounds per square inch.

Claim 24 (Original): The composition of Claim 1, wherein the composition after molding has an Izod Notched Impact strength measured at 23°C according to ASTM D256 of at least about 1 foot-pound per inch.

Claim 25 (Original): The composition of Claim 1, wherein the composition after molding has an Izod Notched Impact strength measured at 23°C according to ASTM D256 of at least about 2 foot-pounds per inch.

Claim 26 (Original): The composition of Claim 1, wherein the composition after molding has a heat distortion temperature measured at 66 psi according to ASTM D648 of at least about 240°F.

Claim 27 (Original): The composition of Claim 1, wherein the composition after molding has a flexural modulus at 23°C of at least about 230,000 pounds per square inch and an Izod Notched Impact strength measured at 23°C according to ASTM D256 of at least about 4 foot-pounds per inch.

Claim 28 (Original): The composition of Claim 1, wherein the composition after molding has a flexural modulus at 23°C of at least about 300,000 pounds per square inch and an Izod Notched Impact strength measured at 23°C according to ASTM D256 of at least about 1.5 foot-pounds per inch.

Claim 29 (Previously Presented): A thermoplastic composition, comprising:

about 15 to about 35 weight percent of a poly(arylene ether);

about 15 to about 46 weight percent of a homopolystyrene;

about 10 to about 35 weight percent of a polyolefin;

about 1 to about 15 weight percent of a hydrogenated block copolymer of alkenyl aromatic compound and a conjugated diene having an alkenyl aromatic content of 40 to about 90 weight percent, and wherein the hydrogenated block copolymer comprises a styrene-(ethylene-butylene)-styrene triblock copolymer;

about 1 to about 15 weight percent of an unhydrogenated block copolymer of alkenyl aromatic compound and a conjugated diene; and

about 2 to about 20 weight percent of an ethylene/alpha-olefin elastomeric copolymer;

wherein the composition is substantially free of rubber-modified poly(alkenyl aromatic) resin; and wherein all weight percents are based on the total weight of the composition.

Claim 30 (Previously Presented): A thermoplastic composition, comprising:

about 15 to about 32 weight percent of a poly(arylene ether) that is the polymerization product of 2,6-dimethylphenol, 2,3,6-trimethylphenol, or a combination thereof;

about 20 to about 46 weight percent of an atactic homopolystyrene;

about 12 to about 30 weight percent of a homopolypropylene; and

about 2 to about 13 weight percent of a styrene-(ethylene-butylene)-styrene triblock copolymer having a styrene content of about 50 weight percent to about 75 weight percent;

about 2 to about 13 weight percent of a styrene-butadiene-styrene triblock copolymer;

wherein the composition is substantially free of rubber-modified poly(alkenyl aromatic) resin; and wherein all weight percents are based on the total weight of the composition.

Claim 31 (Previously Presented): A thermoplastic composition, comprising the reaction product of:

about 15 to about 35 weight percent of a poly(arylene ether);

about 15 to about 46 weight percent of a homopolymer of an alkenyl aromatic monomer;

about 10 to about 35 weight percent of a polyolefin;

about 1 to about 15 weight percent of a hydrogenated block copolymer of alkenyl aromatic compound and a conjugated diene having an alkenyl aromatic content of 40 to about 90 weight percent, and wherein the hydrogenated block copolymer comprises a styrene-(ethylene-butylene)-styrene triblock copolymer; and

about 1 to about 15 weight percent of an unhydrogenated block copolymer of alkenyl aromatic compound and a conjugated diene;

wherein the composition is substantially free of rubber-modified poly(alkenyl aromatic) resin; and wherein all weight percents are based on the total weight of the composition.

Claim 32 (Original): An article comprising the composition of Claim 31.

Claim 33 (Original): An automotive component comprising the composition of Claim 31.

Claim 34 (Original): An automotive underhood component comprising the composition of Claim 31.

Claim 35 (Original): A food tray comprising the composition of Claim 31.

Claim 36 (Original): A sheet comprising the composition of Claim 31.